

ABSTRACT OF THE DISCLOSURE

A first flip-flop takes in an input signal when a register read out signal has an L level; a second flip-flop takes in a signal output from the first flip-flop when the register read out signal has an H level; a third flip-flop takes in a signal output from the second flip-flop when the register read out signal has an L level; a first Ex-OR performs operation between an output of the second flip-flop and a state detection signal, and outputs a result of the Ex-OR operation; a second Ex-OR performs operation between outputs of the first and second flip-flops and outputs a result of the operation; and a third Ex-OR circuit performs operation between outputs of the first and third flip-flops and outputs a result of the operation as a state bit signal.